APPENDIX H

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Examiner: Anne R. Kubelik

axmi-008	MSPMFTSSTKNTLKIETTDYEIDQAAISIECMSDEQNPQEKIMLWDEIKLAKQLSQSRNL 6	60
cry19Aa-orf2	VNFMLTSGAKNMLKLETTDYEIDQMANAIENMSGEQYSQEKMMQWHDIKYAKQLSQARNL 6	60
crybun2orf2	MFISNIKNTLKIETTDYEIDQAAISIECMSNEHSSKEEMMLWDEVKQAKQLSWSRNL 5	57
crybun3orf2	MFTNGTKNTLKIETTDYEIDQAAISIECMSDEHSPKEKMMLWDEVKRAKLLSQSRNL 5	57
cry4Aa	INTFYANPIKNTLQSELTDYDIDQAANLVECISEELYPKEKMLLLDEVKNAKQLSQSRNV 6	60
cry4Ba	VNALFTNDAKDALNIGTTDYDIDQAANLVECISEELYPKEKMLLLDEVKNAKQLSQSRNV 6	
CrylA	LKTDVTDYHIDQVANLVECLSDEFCLDEKQELSEKVKHAKRLSDERNL 4	
Cry4A	LQSELTDYDIDQAANLVECISEELYPKEKMLLLDEVKNAKQLSQSRNV 4	
Cry5A	LAHNVSDHDIEEVVLKVDALSDEVFGDEKKALRKLVNQAKRLSRARNL 4	
Cry7A	LQKDVTDYKVDQVSILVDCISGDLYPNEKRELQNLVKYAKRLSYSRNL 4	
Cry8A	LRPGVTDYEVNQAANLVECLSDDLYPNEKRLLFDAVREAKRLSGARNL 4	
Cry9A	LQVNVKDYQVDQAAMLVSCLSDEQYGYDKKMLLEAVRAAKRLSRERNL 4	
Cry12A	LASNVSDYWIEQVVMKVDALSDEVFGKEKKALRKLVNWAKRLSKIRNL 4	
Cry14A	LALKVSSYQINQVALKVMALSDEKFCEEKRLLRKLVNKANQLLEARNL 4	
Cry21A	LAHTVSDYKIDQVVLKVNALSDDVFGVEKKALRKLVNQAKWLSKARNV 4	
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axmi-008	LQNGDFSGNDWTFGNDIIIGSNNPIFKGKFLQMRGARDIYGTLFPTYICQKIDESKL 1	117
cry19Aa-orf2	LQNGDFEDL-FSGWTTSNQMSIQADNATFKGNYLHMSGARDIYGTIFPTYIYQKIDESKL 1	119
crybun2orf2	LYNGDFEDV-SNGWKTSNTIEIRENSPVFKGHYLHMFGARDIDGTLFPTYIYQKIEESKL 1	116
crybun3orf2	LQNGDFGDFYGNDWKFGNNIIIGSNNSIFKGNFLQMSGARDIYGTIFPTYIYQKIDESKL 1	117
cry4Aa	LQNGDFESA-TLGWTTSDNITIQEDDPIFKGHYLHMSGARDIDGTIFPTYIFQKIDESKL 1	119
cry4Ba	LONGDFESA-TLGWTTSDNITIQEDDPIFKGHYLHMSGARDIDGTIFPTYIFQKIDESKL 1	119
CrylA	LQDPNFYPTYLYQKIDESKL 6	68
Cry4A	LQNGDFFPTYIFQKIDESKL 6	68
Cry5A	LIGGSFSPSYIFQKVEESKL 6	
Cry7A	LLDPTFYPTYLYQKIDESKL 6	
Cry8A	LQDPDFYPTYLYQKVEEGVL 6	
Cry9A	LQDPDFYPTYIYQKVDASEL 6	
Cry12A	LIGGNFHPSYIFQKVEESKL 6	
Cry14A	LVGGNFFTSYAYQKIDESTL 6	68
Cry21A	LVGGNFYPSYAYQKIDESKL 6	68
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axmi-008	KPYTRYRVRGFVGSSKDLKLMVTRYGKEIDAIMNVPNDLAYMQPNPSCGDYRCESSS 1	174
cry19Aa-orf2	KPYTRYLVRGFVGSSKDLELMVMRYGKEIDTVMNVPNDIPYVPSMPVCNELYDGQQPYPN 1	179
	KPYTRYRVRGFVGSSKDLKLMVTRYGKEIDAMMNVPNDLAYMQPTPSCGDSRCESSS 1	173
crybun2orf2		
crybun3orf2	KPYTRYRVRGFVGSSKDLRLMVTRYGKEIDAMMNVPNDLAYMQPNPSCGDSRCESSS 1	174
	KPYTRYRVRGFVGSSKDLRLMVTRYGKEIDAMMNVPNDLAYMQPNPSCGDSRCESSS 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1	
crybun3orf2		172
crybun3orf2 cry4Aa	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1	172 172
crybun3orf2 cry4Aa cry4Ba	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE8 KPYTRYLVRGFVGSSKDVE8	172 172 87 87
crybun3orf2 cry4Aa cry4Ba Cry1A	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE	172 172 87 87 87
crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE	172 172 87 87 87 87
crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE	172 172 87 87 87 87
crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE	172 172 87 87 87 87 87
crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A Cry8A Cry9A Cry12A	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE	172 172 87 87 87 87 87 87
crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A Cry8A Cry9A	KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KPYTRYLVRGFVGSSKDVELVVSRYGEEIDAIMNVPADLNYLYPSTFDCEGSN 1 KAYTRYQLRGYIEDSQDLE	172 172 87 87 87 87 87 87 87

axmi-008	OYVSOGYPTP-TDGYAPDMYACPONIDRKHVKCHDRHPFDFHIDTGEVDTNTNVGIDVLL	233
cry19Aa-orf2		238
crybun2orf2	RYVSQGYPTPVTDGYASGRYACQSNRGTKHVKCHDRHPFDFHIDTGELDTNTNVGIDVLF	233
crybun3orf2	QYVSQGYPTP-TDGYAPDRYACPSSSDKKHVMCHDRHPFDFHIDTGELDTNTNVGIDVLF	233
cry4Aa	RCETSAVPAN-IGNTSDMLYSCQYDTGKKHVVCQDSHQFSFTIDTGALDTNENIGVWVMF	231
cry4Ba	RCETSAVPAN-IGNTSDMLYSCQYDTGKKHVVCQDSHQFSFTIDTGALDTNENIGVWVMF	231
Cry1A	HHFSLDIDVGCTDLNEDLGVWVIF	111
Cry4A	HQFSFTIDTGALDTNENIGVWVMF	111
Cry5A		111
Cry7A	HSDSLNIDTGSINHNENLGIWVLF	111
Cry8A	HEFSLPIDIGELDYNENAGIWVGF	111
Cry9A	HEFSSYIDTGDLNSSVDQGIWAIF	111
Cry12A		111
Cry14A	HFFNYSIDVGALHPELNPGIEIGL	111
Cry21A	HFFSYSIDVGSLQSDVNLGIEFGL	111
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axmi-008		293
cry19Aa-orf2	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD	298
cry19Aa-orf2 crybun2orf2	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD	298 293
cry19Aa-orf2 crybun2orf2 crybun3orf2	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD	298 293 293
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD	298 293
cry19Aa-orf2 crybun2orf2 crybun3orf2	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID	298 293 293
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL	298 293 293 291
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL	298 293 293 291 291
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL KISSPDGYASLDNLEVIEEGPI	298 293 293 291 291 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL KISSPDGYASLDNLEVIEEGPI	298 293 293 291 291 133 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL KISSPDGYASLDNLEVIEEGPI	298 293 293 291 291 133 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL	298 293 293 291 291 133 133 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL	298 293 293 291 291 133 133 133 133 133 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A Cry7A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL KISSPDGYASLDNLEVIEEGPI	298 293 293 291 291 133 133 133 133 133 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A Cry7A Cry8A Cry9A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL KISSPDGYASLDNLEVIEEGPI RIVNPTGMARVSNLEIREDRPL KISTLEGYAKFGNLEVIEDGPV KITDPEGYATLGNLELVEEGPL KVRTTDGYATLGNLELVEVGPL	298 293 293 291 291 133 133 133 133 133 133
cry19Aa-orf2 crybun2orf2 crybun3orf2 cry4Aa cry4Ba Cry1A Cry4A Cry5A Cry7A Cry8A Cry9A Cry9A Cry12A Cry14A	KISSPDGYATLDNLEVIEEGPVRGEAVTHVKQKEKKWNQQMEKKRMETKRVYDRAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISNPDGYATLGNLEVIEEGPLTGEALTHVKQKEKKWKQHMEKKRWETQQAYDPAKQAVD KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KISSPDGYASLDNLEVIEEGPIDGEALSRVKHMEKKWNDQMEAKRSETQQAYDVAKQAID KIKTQDGHARLGNLEFLEEKPL KISSPDGYASLDNLEVIEEGPI	298 293 293 291 291 133 133 133 133 133 133 133